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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Group:	1651
Confirmation No.:	7977
Application No.:	10/634,292
Invention:	**Nano-Structured Polymers For Use As Implants**
Applicant:	Haberstroh et al.
Filed:	August 5, 2003
Attorney Docket:	3220-73239
Examiner:	Susan Marie Hanley

Filed Electronically on

February 18, 2009

MISCELLANEOUS COMMUNICATION

Mail Stop Non-fee Amendment
Commissioner for Patents
Alexandria, VA 22313-1450

Sir:

In response to the Office Action mailed August 20, 2008, applicants submit herewith a Supplemental Response, Supplemental IDS and a Declaration Under 37 CFR 1.132 executed by Dr. Thomas Webster and accompanying supporting data (Exhibit B). After execution of the Declaration by Dr. Thomas Webster the undersigned attorney noticed that Figure 1 of Exhibit B was provided in color. Dr. Webster reviewed the data as provided in the color version of Figure 1. However, applicants believe that even when printed in black and white Figure 1 of Exhibit B still conveys to one of ordinary skill in the art the experimental data supporting the statements made in body of Exhibit B.

To assist the Examiner's review of this matter and to further clarify the data as presented in the original color version of Figure 1 of Exhibit B, applicants also submit herewith a modified version of that figure ("modified Figure 1") where the only changes that have been made to the modified version of Figure 1 are darkening of the graph lines and

designation of the graph lines with the symbols •, ■ and ▲. Furthermore, applicants provide the following figure legend for ease in interpreting the data provided in "modified Figure 1":

Figure legend:
Figure 1: ELISA and Cell Culture Results (A-C) Surface adsorption of collagen type IV (•) and fibronectin (▲), determined using ELISA. Results were calibrated for surface area and normalized to adsorption on smooth surfaces (a.u. denotes arbitrary units as a result of normalization), and compared to (A) lateral surface feature dimension as determined by AFM (B) vertical surface feature dimension as determined by AFM . In (C), left bar is collagen type IV and right bar is fibronectin. Both proteins display almost equivalent behavior with regard to affinity for various surfaces. While adsorption of these two proteins bears no clear relationship to lateral surface feature dimension, it follows a gamma distribution with regard to vertical surface feature dimension, with a distinct maximum well below 100 nm. (D-F) Results of 4 hour endothelial cell adhesion test, performed using MCDB-131 complete media (•) or serum-free DMEM (■), and compared to (D) lateral surface feature dimension as determined by AFM (E) vertical surface feature dimension as determined by AFM. In (F), left bar is MCDB-131 complete media and the right bar is serum-free DMEM. For experiments in MCDB-131 complete media, results are similar to those of protein adsorption experiments described above – while there is no clear relationship between cellular adhesion and lateral surface feature dimension, there is an apparent optimum centered around a vertical dimension well below 100 nm. Experiments performed in serum-free DMEM showed statistically equivalent results for all surfaces, implying that absorption of serum proteins is necessary to maximize cellular adhesion. Values are mean ± SEM, n=3. *: Protein adsorption significantly ($p<0.05$) increased as compared to smooth surfaces. &: Endothelial cell adhesion significantly ($p<0.01$) increased as compared to smooth surfaces and 950 nm lateral / 400 nm vertical dimension PLGA. #: Endothelial cell adhesion significantly ($p<0.05$) as compared to 300 nm lateral / 86 nm vertical dimension PLGA.

If the Examiner has any further questions regarding this submission or if any further discussion of this matter would speed prosecution of this application, the Examiner is invited to call the undersigned at (434) 220-2866.

Respectfully submitted,

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modified Figure 1